



Peng, W-J., McNess, E. M., Thomas, S. M., Wu, X. R., Zhang, C., Li, J. Z., & Tian, H. S. (2014). Emerging perceptions of teacher quality and teacher development in China. *International Journal of Educational Development*, 34, 77-89.
<https://doi.org/10.1016/j.ijedudev.2013.04.005>

Publisher's PDF, also known as Version of record

Link to published version (if available):
[10.1016/j.ijedudev.2013.04.005](https://doi.org/10.1016/j.ijedudev.2013.04.005)

[Link to publication record in Explore Bristol Research](#)
PDF-document

University of Bristol - Explore Bristol Research

General rights

This document is made available in accordance with publisher policies. Please cite only the published version using the reference above. Full terms of use are available:
<http://www.bristol.ac.uk/red/research-policy/pure/user-guides/ebr-terms/>



Contents lists available at [SciVerse ScienceDirect](http://www.sciencedirect.com)

International Journal of Educational Development

journal homepage: www.elsevier.com/locate/ijedudev



Emerging perceptions of teacher quality and teacher development in China^{☆,☆☆}

Wen J. Peng^a, Elizabeth McNess^{a,*}, Sally Thomas^a, Xiang Rong Wu^b, Chong Zhang^b, Jian Zhong Li^b, Hui Sheng Tian^b

^a University of Bristol, UK

^b China National Institute for Educational Sciences, Beijing, China

ARTICLE INFO

Keywords:

Chinese schooling
Teacher quality
Teacher development
Equity
Educational policy
Educational administration

ABSTRACT

This paper focuses on the work of senior high school teachers in three illustrative local authority regions of mainland China. It discusses interview and focus group data collected as part of ESRC/DFID-funded research which examined notions of quality as experienced by key stakeholders (national and local authority policy makers, teachers, head teachers and students). Building on previous international literature and current Chinese education policy, this paper examines aspects of teachers' work as experienced within the context of a fast developing emerging economy, which emphasises a clear link between individual and national development. Barriers identified as impacting on the provision of good quality teaching arose, largely, from the pressures due to changing societal patterns and the demands of far reaching curriculum reform, which highlighted tensions between a traditional reliance on the primacy of exam results and a newer demand for all round development and lifelong learning. In addition, there were common concerns with various structural and funding inequalities, both across different regions and between urban and rural schools, which could lead to differential student experience, shortages of specialised teachers, and a lack of opportunity for good quality professional development.

© 2013 The Authors. Published by Elsevier Ltd. All rights reserved.

1. Introduction

The search for evidence to develop high quality, sustainable education systems continues to intensify as national economies seek to compete globally. The opening Foreword to the findings of a recent Teaching and Learning Survey (TALIS), which reported on the views of teachers and principals in 23 countries, explained the task in the following way:

The challenges facing education systems and teachers continue to intensify. In modern knowledge-based economies, where the demand for high-level skills will continue to grow substantially, the task in many countries is to transform traditional models of schooling, which have been effective at distinguishing those

who are more academically talented from those who are less so, into customised learning systems that identify and develop the talents of all students. This will require the creation of 'knowledge-rich', evidence-based education systems, in which school leaders and teachers act as a professional community with the authority to act, the necessary information to do so wisely, and the access to effective support systems to assist them in implementing change. (OECD, 2009, p. 3)

Such concerns are not limited to economically developed economies but are also the focus of attention in those countries where economic development is less advanced, together with those newly emerging economies such as mainland China. International agreements, like the Millennium Development Goals (United Nations, 2002) incorporating the principles of relevance, equity and rights, also focus on the need to improve the quality of teaching and learning for all children (UNESCO, 2004). However, concepts of quality are recognised to be both complex and contested, especially in relation to disadvantaged communities. Previous work has drawn attention to the powerful discourses of human capital theory and a contrasting human rights approach, arguing for the importance of inclusivity (with regard to access and the achievement of desired outcomes for all), relevance (in relation to what is important for different individuals, communities and

[☆] This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original author and source are credited.

^{☆☆} This research is supported by ESRC/DFID funded projects Improving Educational Evaluation and Quality in China (RES-167-25-0353) and Improving Teacher Development and Educational Quality (RES-167-25-0428). Further details can be found on project website (IEEQC, 2012).

* Corresponding author. Tel.: +44 1173314438.

E-mail address: Elizabeth.McNess@bristol.ac.uk (E. McNess).

nations) and democracy (in terms of who can define what constitutes quality) in education (Tikly, 2011; Tikly and Barrett, 2011). Central to such debates are questions about what constitutes good quality teaching, and how to evaluate and develop the teaching workforce (Anderson, 2004; Leu and Price-Rom, 2006; Mpokosa and Ndaruhutse, 2008). This paper seeks to contribute to the debate on teacher quality and development by drawing on selected findings from research conducted in collaboration with the China National Institute for Educational Research (now the National Institute of Education Sciences) in Beijing. While findings from the main studies have been extensively reported elsewhere (Thomas and Peng, 2011; Thomas et al., 2012, 2013), the purpose of this paper is to discuss some relevant findings which help to contribute to debate on the work of teachers and their ability to provide conditions for good quality learning.

Following a short review of both Western and Chinese literature on aspects of teacher quality and effectiveness, and a discussion of the current policy context in China, a range of findings will be used to illustrate and discuss common stakeholder expectations, as well as teacher values, beliefs and practice. Concerns regarding barriers to further development are also highlighted and these are discussed in relation to current Chinese policy to redress disparities in educational provision, especially between urban and rural settings.

2. Concepts of quality and teacher effectiveness

2.1. Western context

Over the last 30 years, Western research has consistently identified differences in teacher behaviour at the classroom level, rather than differences at the school level, as ultimately more important in explaining variance in student outcomes (Scheerens and Bosker, 1997; Kyriakides et al., 2000; Muijs and Reynolds, 2010). For this reason, there is a growing body of literature which seeks to identify the dimensions of teachers' work that might be identified as being more likely to produce the desired outcomes for pupils. While limitations of space preclude a detailed summary such a large body of research, much of this work identifies three broad areas which have been the focus of more detailed study. For example, a recent survey of schools and teachers within the OECD (TALIS) focuses on *teacher professional competence and related beliefs and attitudes; teacher classroom practice and professional activities; and classroom and school level environment* (OECD, 2009). This has similarities with the three domains of *teacher background characteristics, teaching processes, and classroom ecology and climate* identified as teaching variables by Scheerens (2007, cited in OECD, 2010, p. 30) and the *professional characteristics, teaching skills and classroom climate* identified by Hay McBer (2000).

In a recent review of the literature discussing teaching skills and classroom practice, Creemers and Kyriakides (2012) draw on their own work and that of others (for example, Stallings, 1985; Brophy and Good, 1986; Creemers, 1994; Doyle, 1986; Galton, 1987; Muijs and Reynolds, 2000; Creemers and Reezigt, 1996; Creemers and Kyriakides, 2008) to explain those micro-behaviours which research has shown to be positively associated with student achievement. These include the quantity and pacing of instruction, providing work at an appropriate level for students to succeed, the smooth organisation and management of the classroom environment, systematic evaluation and reflective inquiry to improve practice, clarity of presentation and good communication with students, as well as the judicious use of asking questions and giving feedback to gauge understanding. Moreover, development of pedagogical content knowledge has also been identified as a dominant strand in effective teaching skills in TALIS survey and

this is closely linked with the collaborative activities that teachers engage in beyond their individual classrooms.

Research has also shown the importance of the classroom environment to good quality learning. The quality of teacher–student interaction, student–student interaction, students' treatment by the teacher, competition between students, and classroom disorder has all been identified as important (Creemers and Kyriakides, 2008; Kyriakides and Christoforou, 2011). For Scheerens, *classroom ecology and climate* also includes elements such as class size and composition, teacher expectation and the match of teachers' abilities with classes. For the TALIS framework it is closely linked to the school level environment and teacher–student relations. While for Hay McBer this category is described as 'the collective perceptions by pupils, of what it feels like to be a pupil in any particular teacher's classroom, where those perceptions influence every student's motivation to learn and perform to the best of his or her ability' (Hay McBer, 2000, p. 27). Sammons and Ko (2008) found similar evidence that effective teachers are more likely to demonstrate a supportive lesson climate, proactive lesson management, well organised lessons with clear objectives, and environmental and teacher support. There are also links to other research which has looked at the perceptions of students in relation to effective teachers (for example Rudduck and Flutter, 2000; McNess, 2006; Klieme, 2012). McNess and colleagues found that students in England, France and Denmark all identified *being fair, explaining things well, and making work interesting* as the three most important aspects of effective teachers.

The more generalised area of teacher beliefs and values has also been the focus of much research (Lortie, 1975; Nias, 1989; Menter et al., 1997; Acker, 1999; Hargreaves, 2001; Day et al., 2007). Such work emphasises the importance of the social, historical, cultural and policy context in which teachers work (Broadfoot et al., 1993; Alexander, 2000; Osborn et al., 2003; McNess, 2004, 2009), and draws attention to the need to look behind the more obvious aspects of teacher practice to seek an understanding of the underlying beliefs and values of society in defining policy and the working environment of teachers. This argues against a universal or fixed concept of teacher effectiveness, or what Campbell et al. (2003, p. 352) have referred to as a 'platonic ideal free of contextual realities'. This idea is taken further by some who call for an extension of the levels of analysis to include everything from the supranational to the individual (Bray and Thomas, 1995). Creemers and Kyriakides (2012) propose a 'Dynamic Model of Educational Effectiveness' which takes into account student, classroom, school and system, while Cheng et al. (2002) put forward a 'Framework of Total Teacher Effectiveness' where levels of effectiveness (individual, group, school) are linked to domains of effectiveness (behavioural, affective, cognitive).

Such models are helpful in identifying possible areas of effectiveness though, it can be argued, that none can capture the full complexity of teaching in all contexts. The qualitative data presented later in this paper do not claim to cover all the aspects of teachers' work identified above, nor are such models systematically applied. The authors recognise the limited nature of the data in both scale and scope, and so the intention is to reveal some common understandings and concerns that arose spontaneously in the interviews. But to help in contextualising these perceptions it is first necessary to discuss both current Chinese literature on the quality of teaching, and set this in the current Chinese policy context.

2.2. China context

Generally speaking, within the Chinese context, the term 'teacher quality' is used more broadly than in Western literature. It is used interchangeably with the concept of education quality but

recognises the central role of teachers, where poor quality has been associated with less than adequate outcomes (Guan, 2004). More specifically, Li and Liu (1999) consider that teachers and students must be considered together as the two essential contributors to the learning process, and argue that, fundamental to education quality, are the personal attributes that they bring to the learning situation. These include physical attributes, knowledge, skills, cognitive ability, feelings and emotions, as well as underlying values. This links with Western ideas of *teacher values and beliefs* which have particular resonance in a Confucian heritage context where the teacher has traditionally been regarded as the keeper of moral values. Confucian tradition puts great emphasis on the morality of teachers and this continues to be an important aspect of teacher quality, in the form of teacher professional ethics (Ren, 2009; Jin, 2010; Tang, 2010). The most recent educational development plan within China emphasises the promotion of professional ethics among teachers to such an extent that it concludes that, 'moral conduct shall become the foremost factor in testing, appointing, employing and evaluating teachers' (Chinese Ministry of Education, 2010, p. 36).

Much research on effective teaching, within mainland China, is relatively new and has been prompted, largely, by the new curriculum reform initiated in 2001. This reform essentially signals a shift in government policy towards strongly promoting new teaching methods and more active learner centred-approaches, in order to develop what is referred to as students' all round development or *sù zhì jiào yù*. This term encompasses their moral, intellectual, physical and aesthetic education, and is sometimes translated as 'quality' education. This idea is also linked to the broader need to develop active citizens as the foundation for a prosperous society able to sustain the economic growth required of the new China (CCCCP, 1985; Xia and Song, 2009; Wang, 2011; Wu, 2009). Hence not only are the values and attitudes of the people (teachers, school leaders, curriculum designers, pupils and parents) important, but also an enabling learning environment (Li and Liu, 1999; Xia and Song, 2009). Such developments have led to a series of curriculum reforms which have brought ongoing tensions within the management of education (Dello-Iacovo, 2009). Gu (2011) argues that in order for teachers to successfully address this requirement, they themselves need to be practical, serious, diligent, rigorous, responsible, and demonstrate a high moral and ethical code so as to act as role models for their students. Some research evidence reveals a concern with a perceived reduction in teacher morals and professional ethics, and calls for a renewal of this through the efforts of both teachers and society (Jin, 2010; Guo, 2011). Yu (2008) argues that being aware of their responsibilities and pursuing successful outcomes for themselves and their pupils should serve as the critical driving force for teachers to undertake self-reflection on action to improve their teaching. Rather than other types of occupations, Nie (2007) argues that teachers should regard themselves as professionals, similar to doctors, lawyers and engineers.

Much thought has also been given to why, despite the hard work of teachers, some students still find it difficult to learn, and how best to meet the challenges brought about by the recent curriculum reforms in an information rich and globalising world (Lu, 2009). More recent evidence (Jiang and Yao, 2012; Zhuang, 2012) argues that effective teaching is a process which enables students to both want to, and know how to, learn and employs question-driven instruction and activity-based learning to guide students in learning how to think. More importantly, it is argued that it is necessary to leave space within class time to encourage students to discover problems for themselves and to find their own personal meaning in knowledge, so that they can be the masters of their own learning. This links to previous research in the USA (Dweck and Leggett, 1988) and newer Western concepts of the

teacher as facilitator. Tu and Pan (2011) meanwhile draw attention to the dimensions of efficiency in relation to time and results, in the context of large classes. There is also survey evidence indicating that, from the teacher's point of view, effective teaching consists of three major stages: (i) pre-lesson preparation where teachers think through the details of a lesson plan, identify teaching objectives and materials, and predicting difficult learning points, (ii) in-lesson teaching, which involves creating contexts for students to experience the exploration of new knowledge and thinking activity, adopting multiple approaches, including the use of ICT, to accommodate all students' learning styles, while monitoring students' learning, and (iii) post-lesson activity, which includes teachers engaging in self reflection on how the lesson went, and providing homework feedback to students (Huang, 2011).

Another strong theme within Chinese research relating to quality is the concern with issues of inequality of educational access and provision (Fang and Feng, 2005; Zhu and Zhou, 2006; Liu, 2004; Yu, 2010). Despite the 1986 Compulsory Education Law which requires all six-year-olds to enrol in nine years of compulsory education, regardless of gender, ethnicity or race, significant inequalities remain. State Guidelines (Chinese Ministry of Education, 2010) maintain that the government's aim is to achieve education equity through the preferential allocation of resources to rural, remote and deprived ethnic minority areas, thereby narrowing the education gap. The guidelines set targets for achieving 95% retention rates for compulsory school children, and 90% and 40% gross enrolment rates for senior high and higher education (including vocational education), respectively, by 2020. Since the opening up of the Chinese state, there is an increasing focus on international responsibilities and some evidence that mainland China is influenced by a responsibility to meet UNESCO's initiative requiring education for all (Jing and Hu, 2007). There is also some evidence that policy is being influenced by international tests such as the OECD Programme for International Student Assessment. This has brought concerns with the traditional school test and entrance examination formats which have been criticised for being highly subject knowledge-based, leading to instrumental teaching methods (Zhou, 2010). Attention is now being focused on tests which look beyond knowledge processing and retention, to use of knowledge and problem-solving (Kong et al., 2005; Li, 2009). So, similar to themes identified in the Western literature, teacher quality within the Chinese context includes such dimensions as teacher motivation, affective attributes (such as passion and respect), underlying beliefs in the value of change and innovation, as well as specific personality traits, such as confidence, diligence, devotion, independence, reflection, openness and tolerance (Wang et al., 2010).

Though there is some overlap in the conceptual models in both the Western and Chinese contexts, there is still no common definition. A definition proposed by Campbell et al. (2003) suggests that being an effective teacher should include: 'the power to realise socially valued objectives agreed for teachers' work, especially, but not exclusively, the work concerned with enabling pupils to learn'. They recognise that this definition is 'not perfect', but it is useful in that it helps to problematise a previous focus on narrowly defined student outcomes, raising issues of the underlying values of teachers' work and how these may influence the broader goals of schooling. It is with these ideas in mind that the next section looks at the policy perspective of teacher effectiveness and development within mainland China.

3. Current policy context in mainland China

As the world's most populous country, China regards the development of a high quality teacher workforce as essential to the future prosperity of its people. The most recent Outline of China's

National Plan for Medium and Long-term Education Reform and Development (2010–2020) opens with the following paragraph:

A nation's enduring future hinges on education. Education is the cornerstone of national rejuvenation and social progress, and a fundamental way to improve citizens' quality and promote their all-round development, bearing the hope of millions of families for a better life. Education must be enhanced if a nation is to prosper. (Chinese Ministry of Education, 2010, p. 5)

But, the document goes on to express concern that:

Our concept of education and our teaching contents and methodology are relatively outdated, schoolwork burdens on primary and middle school students too heavy, the promotion of quality education arrested, our students weak in their adaptability to society, and innovative, practical and versatile professionals in acute shortage. (Chinese Ministry of Education, 2010, p. 6)

The situation is regarded as particularly acute in impoverished rural areas, and a growing body of literature, published both within and outside China, identifies a deficiency in both the quality and quantity of teachers as a key drawback in raising the quality of compulsory education provision, ensuring equity and enabling the government's aspiration of education for all (Liu, 2004; Jing and Hu, 2007; Robinson and Yi, 2008; Yi et al., 2012). Evidence from the 2008 National Inspection Report on teacher quality, based on a survey sample of approximately 320,000 teachers, field research in seven provinces/autonomous regions, and an analysis of the annual education statistics from all counties in mainland China from 2002 to 2007, clearly showed that there was still a significant gap between schools, especially between compulsory phase rural and urban schools in the career infrastructure, qualifications, rights and interests of teachers (National Education Inspection Team, 2009). Some rural schools, particularly those in remote areas, were found to have insufficient numbers of teachers, compounded by a lack of certain subject expertise (for example, foreign languages, physical education, music, the arts and ICT). There were also big differences between schools in the percentage of teachers with senior academic titles, especially between urban and rural schools, revealing an uneven distribution of resources, due in part to the negative effects of school choice where parents are willing to pay additional fees for some schools. On average, 20% of teachers in urban schools and more than 40% of teachers in rural schools had a mismatch between their professional qualification and the subjects that they were required to teach. The report also revealed poorer salary, medical insurance and working conditions for teachers in rural areas and limited budgets for professional development. With regard to accessing additional resources to address these challenges, senior high school education is currently vying with pre-school provision to be included as part of the planned extension of compulsory education provision to provide 12 years of schooling, the outcome of which is still undecided.

As mentioned previously, since 2001, teachers have also been facing new challenges from the ongoing implementation of nationwide curriculum reform. This seeks to ensure the all-round development of students by requiring teachers to move outside a transmission model of teaching and learning in order to encourage students to be active, creative and responsible for their own learning, creating a democratic environment where students' voices can be heard (The State Council of the People's Republic of China, 2001; Halpin, 2010; OECD, 2011). For example, the reform calls for teachers to develop optional courses which enrich students' knowledge, skills and practice, by fostering students' social responsibility and narrowing the gap between individual,

employer and society priorities so as to meet local economic needs, particularly in rural areas (Chinese Ministry of Education, 2001). Specifically, in relation to the process of teaching, it demands that teachers have to actively interact with, and meet the needs of, individual students, guide students to question and explore as well as investigate, and use ICT to support their work. This is a fundamental change which calls for teachers' use of constructivist models of teaching and learning, and links student learning to real life issues rather than their more common traditional transmission approaches to teaching, learning and the distribution of knowledge. Hence there is an increasing demand on teachers to professionalise their work, and to continuously enhance their level of teaching (Yu, 2010).

Such concerns were highlighted and prioritised in the 2009 National People's Congress (National People's Congress, 2009) and the current National Plan (2010–2020) refers to the following strategies in the development of high quality teachers:

It is therefore essential to improve the status of teachers, safeguard their rights and interests, raise their salaries and benefits, and turn teaching into a respected occupation. It is important to be strict with teachers' credentials, enhance virtue building among them, and strive to establish a well-structured and dynamic contingent of professional teachers of high calibre and imbued with moral integrity and teaching expertise. (Chinese Ministry of Education, 2010, p. 36)

The Teachers' Law, within mainland China, states that teachers should be seen as professionals who are charged with the duty to impart knowledge, educate people and provide guidance and evaluation in relation to students' study and development. They should enjoy the rights of being included in discussions about the reform in teaching, be able to engage in research and academic exchange, receive salaries on schedule, benefit from prescribed welfare, and gain opportunities for further professional training (National People's Congress, 1993). While being respected by society, the law further specifies that teachers have an obligation to abide by the constitution and act as a role model of virtue and learning, put educational policies into practice, fulfil their teaching contracts, educate students based on the basic principles defined in the constitution, care for all students with love and respect, promote students' all-round development, stop acts that are harmful to students, and continuously improve their professional competence in education and teaching.

Historically, education within China has been respected and seen as a means of escape from poor socio-economic conditions. Academic achievement has for thousands of years been a way of achieving status and honour, both for the individual and the family. In the past, the Chinese government took sole responsibility for defining quality and allocating resources. More recently, the process of drafting the recent guidelines has taken two years and is the result of two rounds of consultation.

4. Research design and data collection

The data reported here relate to individual and focus group interviews collected in eight Chinese senior secondary schools located across three local authority areas chosen to be illustrative, as far as possible, of national conditions. Two local authority areas were situated in the central eastern region of mainland China and consisted of a mixture of large urban/city areas, together with small town and rural areas. The western region was markedly different with mostly poor rural and small town areas, and included a significant minority of non-Han residents in the local population. Individual schools were identified, based on a willingness to take part in the study, with six catering for students

from 16 to 19 years, and two for students between the ages of 13 and 19 years. All included boarding facilities, which for some accounted for up to 82% of their intake. Within the regions, the project schools were located in a variety of contexts: large urban districts, residential suburbs, and poor rural areas. Within each of the three local authority areas, there was at least one rural and one urban project school.

Individual interviews were conducted with the headteacher and/or deputy headteacher in each of the eight schools. Focus groups in each school were also conducted with a group of three to five senior high school teachers and three to seven senior high school students, all aged 18 years or above, within each school. In addition, four national policy makers, nine local policy makers (three from each region), and two policy makers from other local authorities voluntarily took part in the interviews. All participants were assured of confidentiality in the reporting of their contributions, and have been identified in code only according to the local authority where they were located, the institution in which they worked and the type of stakeholder they were: policymaker, headteacher, teacher or student.

The individual interviews and focus groups, which involved over 90 stakeholders, generally lasted 1 h, were tape recorded, conducted in Chinese by native Chinese speakers, and carried out over a two-month period in 2008. The interview data were initially transcribed into Chinese and summarised into 13 reports of emerging themes related to the study research questions: including one for each study school; one for each local authority; one for the additional local authorities; and one at national level. These theme reports were then translated into English and further analysed drawing on the developing themes of stakeholder beliefs and attitudes towards quality education; classroom practice and professional activities; and classroom and school environment. Issues of curriculum development; equity; and further professional development were further themes that had particular relevance both for the current context in China and for the sample of respondents who took part in the study. However, given the relative size of China, it is recognised that only a relatively small sample of schools and stakeholder interviewees were possible, and so these findings are intended to be exploratory and illustrative, rather than definitive, and a more detailed discussion of the limitations of the work is included in the concluding section of this paper.

5. Illustrative findings

5.1. Stakeholder expectations and the work of teachers

There was a clear consensus from stakeholders that the nature of quality education should be centred around appropriate outcomes for students. It was important that the students received an education which contributed to their all-round development, and that they should be able to contribute to the economic prosperity of the nation. This view was in line with government policy and identified teachers' work as extending beyond the classroom to include the cultivation of a certain optimistic attitude to life and a resilience that would support students in later life. As one teacher put it:

pp. 21–32 once entering society it is impossible for a person to always live smoothly and in good times throughout their whole life. Frustration, failure and rough times are unavoidable. Therefore, to have an optimistic, positive and high-spirited attitude and the philosophy of life is very important ... I think education is to foster students as being a useful person but without forgetting to cultivate them as being a happy person. (Lea1Sch1TA, pp. 21–32)

This was echoed by a student:

From the nation's point of view, on one hand, various kinds of talents are cultivated via educational institutions in order to serve our country and society. On the other hand, education is to promote overall quality of citizens ... from the view of individuals, I think, we're now receiving education to serve our future life and job. (Lea1Sch2SC, pp. 45–54)

Such sentiments led to the view that being a teacher in China has been traditionally regarded in very broad terms, having many responsibilities in relation to their students. As one deputy headteacher in a rural school put it:

Schools are a place for incubation and development of talents. Therefore, 'people' are important. There are two aspects that should be reflected on. First, schools have to be student-centered and this should drive how schools arrange all their work including resource allocation ... the second is about the quality of people who deliver teaching and the spirit of the team as these would influence students ... the quality of people delivering teaching includes their personality, knowledge, approaches, spirit, and etcetera. All these are also one feature of an effective school. (Lea3Sch1HTC, pp. 387–394)

Such professional characteristics also included commitment and a moral and ethical dimension for, as a headteacher in an urban context commented, quality education included, *a teaching workforce with commitment which reflects the overall academic atmosphere, work ethic and responsibilities, team morale, and the ability of distinguishing right from wrong* (Lea2Sch2HT, pp. 462–487). This theme was taken up by a student from the same school who said, *I think a good teacher not only has a high teaching level but also has ethics which I think is particularly important. Being a teacher, he or she has to set an example by personally taking part* (Lea2Sch2SA, pp. 402–409).

This requirement for teachers to act as moral agents and role models reflects the influence of Confucian civilisation and long-established culture where teachers have, traditionally, been respected members of society, having a moral responsibility to attend to their students' needs. A headteacher in an urban school put it this way:

Since ancient times, we are influenced by East Asian Confucian civilization. There is a proverb saying that it is a teacher's laziness or irresponsibility if he or she does not strictly supervise his or her students and teach them with diligence. ... therefore, it should be said that, in Chinese schools, teaching [in basic education] is rather rigorous. Knowledge structure and courses on offer are fairly comprehensive. (Lea2Sch2HT, pp. 57–59)

Chinese culture also puts great emphasis on collective responsibility, collaboration and success of the group. It is not enough to be successful in your own subject area, there is a responsibility to contribute actively to the success of the group. This is illustrated in the following quote by a headteacher in a rural school:

If a class is very effective and energetic, it could be concluded that, firstly the teaching team ... I think the team, should be very, very communicative and cooperative ... the head teachers of a class should be able to unify all subject teachers of the class in studying their students on a regular basis ... to learn what problems exist in students' thinking and learning. If a student is performing poorly in Chinese, then his/her Chinese teacher can deliver specific, individual lessons. If it's in maths, then his/her maths teacher will look into where the problem is. Or if it's about a student's puzzled thinking and emotion, then the teachers who have a good relationship, rather than those who

have a bad relationship, with the student can handle the issue. We have been employing a similar approach by asking individual teachers to take a few students to provide guidance in aspects of affective learning methods. That's it! Teachers should act in coordination with each other. Everyone has to clench their fist into one to work together. We can't just, like you do your own job and I do mine without communication, is that right? The reason for many students who failed to get into a college is that [for example] they did well in mathematics but not in Chinese. Chinese dragged them down. (Lea3Sch1HTA, pp. 352–366)

However, it was also clear from the responses that, in common with much research around the world (Skilbeck and Connell, 2004; Hextall et al., 2007), society in mainland China was changing. This had brought new pressures and challenges for teachers in terms of how they conceived of their role. One significant change was the complex nature of student experience, which required a broader understanding of the lives of students so as to address students' social and emotional needs. This was particularly relevant in the more disadvantaged Western region. As one local policy maker put it:

To be honest with you, I was a teacher for 20 years. But how can I put it? This is really different. When I was a teacher, I felt there were fewer disturbances but just ... teaching. Now, there are issues including safety, moral and mental education of students facing teachers. In the past, we didn't think that students would have such things as mental problems. They, even those from poor families, were all normal. We were in that kind of environment. It seemed that there were no contradictions. As for now, quite a few students whose families are worse off or poorer compared with others, for example, in terms of clothing, have a sense of inferiority. Some even just left a letter and ran away from the school because of this. So, students' minds tend to be more complicated, and their endurance has become weaker. Being a teacher, you have to teach as well as be worried about all sorts of other issues. The pressure is greater [than before]. It is no easy job to be a teacher. (Lea1LPM6, pp. 488–495)

One of the reasons for this societal change was the effect of mainland China's one child policy which has meant that extended families, grandparents as well as parents, invest heavily in promoting academic success for their children. In a society which values hard work and commitment, and sees educational success as a way to improve the life chances of not only individuals but also their extended families, this could bring particular pressures for teachers. As one headteacher commented:

During all these years, society has changed a lot. From a family perspective, nowadays, children who are the only child are blessed and cared for by their grandparents, maternal grandparents, in addition to their parents. They are a special generation, having more care, but also hoping to gain more. I have been a teacher for over 20 years since 1987. I feel that there are differences in the approaches and methods used to educate them as compared to those of previous generations. (Lea3Sch4HTB, pp. 215–218)

In addition, there were new demands on teachers, in both urban and rural situations, to enable students to go beyond just obtaining knowledge and required that, in order to maximise their potential after graduation, they were prepared for a new and changing society. One student from an urban school expected teachers and the school, *'to help students establish correct outlook on life and value. This includes being able to deal with problems independently after entering the society, being innovative at work ... but more, it can nurture my thinking consciousness and me being in*

the habit of thinking' (Lea2Sch2SB, pp. 17–25). Similarly, one student from a rural school required teachers to, *'discover the strengths of each student and help them to inspire their interests and hobbies in order for them to make best of their strengths. After all, this is a diverse society that needs all aspects of talents'* (Lea3Sch1SD, pp. 318–321).

However, such views were also tempered with an emphasis from all stakeholders on the importance of exams and competition in the employment market. This appeared particularly important for those in rural areas. As one headteacher explained:

It is related to families' own interests ... within the current Chinese context, because of the high population, there is a particularly large pressure of employment. Now, above all, is the entrance exam for senior high school, or for college, including master and doctoral degrees, there is a basic rule that applies to all these situations. That is how to achieve higher levels of educational qualification in order to have a wider selection of jobs. (Lea3Sch1HTB, pp. 46–57)

Similarly, a teacher from another rural school, while recognising their role as moral agent, also emphasises the need to enable students to gain good qualifications because it is unlikely that:

... an industry would employ someone simply because he or she is morally good but has no educational qualification. No qualification probably means being jobless. The moral quality of a person does not matter as long as you have a qualification ... (exam) scores are the very life of students. Students pursue scores. Teachers pursue scores. Parents pursue scores. This is the current situation. As a result we, as teachers, teach students how to achieve high scores in exams. (Lea2Sch1TC, pp. 129–137)

However, such an approach is counter-balanced by concerns which reflect the recent curriculum reforms aimed at engaging students in a broader curriculum in order to develop the knowledge, skills and understanding necessary for a changing national and global context (Guan and Meng, 2007). These changes have sought to improve teaching resources and develop more generic skills, beyond focusing solely on examination success. As one local policy maker explained:

There is this situation that our students have high examination score, but they are still lacking in comprehensive ability in terms of practical ability and creativity. We are doing that now actually. Since 2000, our nation has begun the 8th curriculum reform. The reform is trying to influence the situation via changing teaching materials ... in order to improve students' thinking ability, creative ability, studying and problem-solving ability as well as practical ability ... gradually the situation of high scores and low abilities will change for the better as long as we persist in working hard (Lea1LPM5, pp. 182–194).

5.2. Classroom practice and professional activities

This broad view of the role of the teacher and an emphasis on the support of individuals was also apparent when stakeholders talked about versatility and flexibility within classroom practice. Teachers talked of it being necessary to impress students with expertise beyond their particular subject specialism and offer the students more than the knowledge contained in the curriculum. Additionally, good teaching required an element of enthusiasm and charisma. One teacher spoke of using teaching to:

... conquer your students. Second, you'd better master something else other than teaching as much as possible. Additionally, you should impress your students and make them

admire you from their heart. Then I guarantee you a comfortable class atmosphere (Lea2Sch1TB, pp. 510–512).

Another teacher, from the same school, gave the following explanation:

If you are a maths teacher, you are also familiar with physics and you apply the knowledge of it in your maths classes; or you even know something about arts, then your lectures will excite your students ... schools should encourage teachers to develop their multi-talents Of course, the prerequisite is that teachers must do their own job well. (Lea2Sch1C, pp. 516–522)

One student in an urban school regarded the quality of their teachers as high and linked this to their ability to go beyond the curriculum and existing resources:

As to the quality, I think it's very good in our school. At least the level of those who teach me is very high. Especially in class, they will supplement things that we are not able to get from textbooks, will provide new ways of thinking that are not confined to textbooks. (Lea2Sch2SC, pp. 50–52)

There was also a concern with the need for teachers to ensure that they employed different teaching approaches in order to take account of differences in students' aptitudes. A policy maker in the Western region drew attention to the ability to differentiate, and characterised good quality teaching as being able to:

... recognise the differences between students and to be concerned in developing different levels of students ... if the school is an effective one, it can suit the remedy to the case. That is to say, teaching students in accordance with their aptitude. (Lea1LPM6, pp. 383–384)

This sentiment was supported by a student who saw clearly the need for good teachers to address the needs of individuals while, at the same time, recognising the pressure that this would put on teachers and the need for appropriate resourcing:

If teachers can enable each student to improve, it must be that they seek different methods aimed at individual strengths and weaknesses ... to some extent the cost of this practice can be very high, including the input of teachers' energy ... and organising this is pretty difficult. In practical terms, this probably involves teacher allocation in order to provide each student with teachers that are suitable for them. (Lea2Sch2SB, pp. 394–395, 395–398)

This recognition of the value and importance of appropriate teaching strategies and teaching materials was also expressed in relation to the use of feedback data at the local level to aid in identifying good practice. As one local policy maker explained:

... this year, for example, we (the LEA) will choose two subjects ... according to the exam results of a few randomly chosen schools. We will find out which subject has reached the expected goal. This is not intended to assess a school or teachers, but to determine what efforts have been made to improve the teaching of the subjects. (Lea1LPM4, pp. 89–96)

There was also evidence of the development of more systematic educational evaluation at the local authority level to inform practice. One policy maker supported the recent introduction of value added approaches by saying:

As the headteacher, if you use this method, the result will be very obvious and quantitative, and the performance of all the teachers will be put onto paper – and it is very convincing. (Lea1LPM10, pp. 189–194)

This view was endorsed by a headteacher who said:

[LEA district] has recently been planning to implement a so-called relative evaluation [similar to value added evaluation] into the current school evaluation system so that the evaluation would become more scientific ... I think it is very good, very good, and is of real education science. I have benefited from learning about this innovation in school evaluation even though I have been a practitioner for many years. (Lea1HTA, pp. 18–20)

Though these new techniques were often focused on a narrow range of academic student outcomes, it should be recognised that, as highlighted in the previous section, Chinese teachers also saw all round development as a high priority and recognised the need for assessment and evaluation improvement across a broad range of educational outcomes.

5.3. School culture and classroom climate

In line with the broader view of teaching quality that has been expressed in recent literature within China, the dual importance of a supportive school culture and appropriate classroom climate was also referred to by most interviewees. One urban headteacher drew attention to the contextual nature of this culture and the need to ensure that it was continually reviewed to take account of changing circumstances:

To judge whether or not a primary or secondary school is good, first we observe its campus culture to see if it is a good place for studying, a good environment for children's physical and mental development ... a good school should be the one that implements the ideas about what is good according to its own understanding. It is fine even if you revise your ideas in the process of practice. (Lea2Sch2HT, pp. 341–363)

In particular, there was a view that when students understood, and were in agreement with, the overall culture of a school, learning could be enhanced. One teacher used the term '*cultural penetration*' to address the importance of a student's recognition of, and alignment with, a school's cultural identity:

The crucial point is cultural penetration. That is, what is the culture of the school. In this school, it is about indomitable spirit, in other words, being able to strive, being cautious, being diligent, and being innovative at work. If a student has characteristics similar to these school cultural identities ... then obviously, he or she can live and learn very, very well in this school. (Lea3Sch3TC, pp. 640–643)

Such a clear vision and statement of aims could be considered important in terms of motivating individual students to do well. As one student said, '*schools need to make students understand themselves and find their own direction for development. Moreover, schools need to encourage students to have motives to improve and move forward*' (Lea1Sch1SC, pp. 162–164).

The importance of a supportive and positive school culture was also seen as important in terms of enabling students to further their education at a higher level. One rural headteacher attributed their yearly increase in college entrance rates over the past 10 years, to a good teaching and learning ethos which had been developed within the school. He recognised the support that this gave to teachers by saying that:

Our teachers have a positive teaching manner because they feel, "I am proud of working for this school and being able to cultivate more and more good students. It's an honour mission to me". Then our students have very affirmative learning attitudes. They know why to learn, how to learn and learn the good things. (Lea3Sch2HT, pp. 407–409)

A positive school environment went hand in hand with the atmosphere within the classroom, which, for some, included an equal relationship between teachers and students, so that students did not feel undermined but part of a supportive learning environment which enabled them to focus on their work. As one teacher pointed out, *'because students have a sense of identity and belonging, they recognise the class, the collective and the environment, and of course, they also recognise their study'* (Lea3Sch3TC, pp. 647–648). As one student put it, *'a class will gain progress as a whole if it has a good atmosphere, which definitely leads to a good learning environment'* (Lea2Sch1SC, pp. 293–294). However, this could be disrupted by student action. One student considered that, at his school, learning time was wasted because he understood that students at another school used break time to continue their studies. This was not the case in his school where he considered that it was more common for students to play around. A student from a third school had similar issues and was worried about the situation where, *'if our classmates one by one are following someone else to just play around, our mood for learning would be soon disappearing, because our focus would be turning to play and totally ignoring the learning aspect'* (Lea2Sch1SB, pp. 306–309).

Such peer influence could particularly disadvantage rural students who, even if they wanted to learn, could be disrupted because, as one student put it:

Other classmates are interested in something else, which is nothing to do with learning. Sometimes, if people have low-self control, it's difficult to concentrate on learning ... they will be affected by the surrounding environment. That is, the influence from classmates. (Lea1Sch2SA, pp. 306–309)

There was evidence to suggest that some urban students were regarded as more difficult to control because of differing socio-economic circumstances. For example, some urban parents might have enough social and cultural power to intervene with regard to how a school was dealing with their child's misbehaviour. This was rationalised by recognising that it might be less critical for students from wealthy backgrounds to achieve academically because an influential family background would help their future prospects. As a student from another school said, *'urban students come from families with money and power. No matter how they disturb [the flow of schooling] the school has no way of controlling them because of a conflict of interests'* (Lea3Sch4SC, pp. 339–340).

Another issue that emerged from the student interviews was whether or not competition within the classroom had positive or negative effects on student learning. Students' views differed and the two quotes below represent, to some extent, the differing views of rural and urban students. One rural school student emphasised the need to encourage competitive collaboration in learning:

An effective school should know how to teach students to compete. Because competitiveness in the future and in the past is very important, a school should have sufficient competition. I have a feeling, in a class, the effect that comes out of one student working on questions is not the same as the effect that comes from two students competing with each other when working on questions. It involves improvement no matter the speed or the accuracy [of answering questions] ... if everyone knows [the essence of] competition, then all students will compete [with each other], and then all will be full of energy, and then all will make rapid progress. If a school can fully mobilise their students' sense of competition, then the effectiveness of the school would be, should be, high. (Lea3Sch2SC, pp. 285–290)

By contrast, a student from an urban school in the same region disagreed and argued that competition could be counterproductive, *'the school should not create such a competitive environment. I*

think you should compare the progress you've made yourself and find your value. It is not necessary that you must exceed other students and have to compare yourself against them' (Lea3Sch4SD, pp. 547–549).

The concept of collective collaboration is a significant feature in a society which emphasises the collective over the individual (Hofstede, 1991; Cheng and Wong, 1996). One teacher gave an example of how evidence of cooperation and collaboration had, she felt, been helpful to one student who gained a place at an overseas university, *'in the interview, the student didn't tell the university [about his involvement in a school choir] from the point of view of him leading the choir, but from the angle of sharing experiences with members in success and joys'* (Lea3Sch3TD, pp. 549–551).

5.4. Perceived barriers to improving the quality of teaching and learning

Despite some clear views on what it means to be an effective teacher, it was also evident from the interview responses that there were barriers to ensuring quality and the future development of teaching. This largely centred around issues of continuous professional development and disparities between wealthier urban and more disadvantaged rural districts, both of which are currently the focus of government policy. As a deputy headteacher said, there was a need to:

... promote not only student development but also teacher development. During the process, teacher development could have a positive and assuring impact on the school's overall development in the future. Therefore, it should also be our priority. (Lea3Sch4HTC, pp. 57–58)

A deputy headteacher in the same school gave examples of what was currently available to teachers, *'the professional development of teachers includes opportunity for postgraduate study ... professional training ... [and] relevant subject activities organised by the Provincial Educational Research Institute every year'* (Lea3Sch4HTB, pp. 358–363).

Respondents reported that teachers had various opportunities to further their studies, including some courses that were award bearing. Training programmes were organised at school, county/city, provincial and national levels. For example, one Western region local policy maker talked of an 8-day training programme in his area which involved 14 expert teachers, across 10 subjects, who visited from another province to focus on a new curriculum for all senior high school teachers in the county, in order to improve teacher capabilities. There was also evidence of school-based initiatives where there were high numbers of new teachers. Such initiatives could involve mentoring, observation of teaching and visits to and from other schools, and were considered to be thorough and were received favourably:

Currently, we have more school-based training, mainly focusing on teacher improvement ... for the past few years, the school has been recruiting a relatively higher number of new teachers. In order for these teachers to adapt to teaching, the school has been organising different approaches to support them. For example, new teachers are paired with senior teachers. Besides that, we also invite experts, famous teachers from other schools, higher education institutions, as well as within the school, to comment on new teachers' teaching. Moreover, we send teachers out of the school to observe, study and learn from other teachers' teaching in order to improve teachers' professional level ... personally speaking, training, when organised by schools, is able to look into in every aspect. This type of training is more effective. (Lea1Sch2T, pp. 389–393, 466–467)

However, financial limitations and difficulties with workload and cover for absence due to training attendance were seen as restrictions. This tension is illustrated by the following two comments from a teacher and headteacher from the same school:

If there were more funds then we could have more opportunities to learn from outside school. This is a concern also for the development of the school. (Lea3Sch4TA, pp. 304–305)

and,

For example, if a teacher leaves for one-month's training, during this month, all his or her class lessons have to be shared by other teachers who would be overloaded ... teachers benefit from this training but this creates additional difficulties in school management. Even so, we want them to receive training. (Lea3Sch4HTA, pp. 373–377).

Again, these pressures can be especially acute for staff in rural schools. As one rural headteacher explained:

Nowadays there are higher expectations for teachers than before, and many young teachers cannot adapt to the expectations. The training for professional development is urgently needed. However, the training system fails to develop owing to lack of personnel, even though there are various kinds of training within the school. But I think it is still unsatisfactory. (Lea1Sch2HT, pp. 303–308)

This situation, in terms of training and development, could be exacerbated by a shortage of teaching staff. Several interviewees drew attention to a serious structural problem in rural areas where there was a mismatch between supply and demand for some subject teachers. The lack of sufficient non-core subject teachers in rural high schools could have serious repercussions for the breadth of the curriculum. As one national policy maker explained:

For example, the ratio of teachers to students is set at 1:20. If you reach 1:22 or 1:23, it should be fine. But most of the teaching staff are language and maths teachers. There are not enough music, sports and art teachers. The problem of structural vacancies is very serious. (NPM3, pp. 313–315)

This was further explained by another national policy maker who said:

Since funding is not sufficient, headteachers have no other way but to use the limited funds they have for core subject teachers. To the extent that some schools cannot even afford to buy a basketball. How can you run a PE lesson without basketballs? Consequently, the overall development of children is influenced. (NPM1, pp. 420–422)

A student reported that in her rural school there was a problem with English specialists saying that:

Teachers in the school when I studied there were not formal teachers. I think it is a drawback too. That is, even now our rural school has no English teachers ... English as a curriculum subject has been provided for the students of the 3rd grade in primary schools in urban schools here, but our school still hasn't got English teachers. (Lea1Sch2S, pp. 119–124)

Such concerns can be particularly acute in remote rural areas. This reflects the fact that the population is more disperse, the terrain can be challenging and the distances travelled to school greater. This can lead to small schools with limited resources where professional qualifications and teaching quality are poor. Though the curriculum content is common across China, the level of implementation can differ from region to region. As one student said:

The level of some teachers in small and remote schools is very limited. For example, some teachers who teach Chinese phonetics can't even speak good Chinese. I feel the limitation of those teachers' ability will influence students' pronunciation in the future ... the route to the school was a mountain road. It's tough. Because only more or less 10 students went to this school, there was only one teacher ... practically the school was just a single room ... I think it is a little bit unfair ... for teachers recruited by such schools were generally not qualified ... the government has to do something about it, to resolve the difficulty for remote rural children to access school. (Lea1Sch2SA, pp. 150–155, 109–113, 117–120, 146)

The need to improve teacher training and supply, and disparities between rural and urban areas have been recognised by the government which has implemented various policies to ensure that teaching facilities and equipment are prioritised for poorer areas (National People's Congress, 2009; Chinese Ministry of Education, 2010). One student recalls how their junior high school benefited from such policies:

In relation to the distribution of educational resources, I think things such as computers, TV sets, multi-media classrooms or audio classrooms, according to our policy, are given firstly to poorer areas. For example, the junior high school that I went to is a small rural school and has more scholarship places than any other city school; moreover, it was one of the schools to get access to the Li Jiacheng remote educational network in Hong Kong ... all of these show that our government and educational administrative units, they are all making efforts to improve education as much as possible, with the hope of distributing the educational resources more equally to every student, especially to improve the reasonable distribution of funds to poor areas. (Lea1Sch2SC, pp. 204–223)

There is also a nationwide policy to encourage new teaching graduates to work in rural schools and for highly performing schools to send their teachers for one or more years to support less developed rural schools. However, there are questions about the extent to which this is successful. As one headteacher said:

Graduates want to go back to the city when they become mature after serving rural schools for a few years ... for teachers like those in our school, who were sent to rural schools, what is in their mind is that, 'I want to go back to my original school once I finish my task here'. The policy is just an expedient measure, which can't resolve the fundamental problem. It's difficult to achieve the solution. China is geographically huge. The number of teachers we need is amazing. Therefore, the problem won't be resolved itself within a short term period. From a long term perspective, the solution relies on the economy. As long as there is balanced economic development, remuneration and living standards are the same no matter where I work [then it will succeed]. (Lea3Sch1HTA, pp. 142–153)

Further, respondents pointed to a salary gap between teachers in rural and urban locations. Some saw differences even within areas. There was a general view that the salaries of rural teachers did not match their workload, despite the fact that they felt morally obliged to carry out their duties for the benefit of society. There was also recognition that a new generation of teachers may not feel the same way in terms of the balance between workload and salary, as one rural teacher said, '*for new teachers, they consider that they should be paid for what they actually give, if it was not the case, they got a bad sense of balance*' (Lea3Sch1TB, pp. 573–574).

So, it can be seen that, despite a strong government commitment to educational improvement and strategies to

ameliorate the disparity between schools and regions, serious concerns remain over teacher training, supply and professional development especially in poorer rural areas. The implications of this will now be discussed in the following section.

6. Discussion

These illustrative findings reveal many similarities with countries around the world in terms of both stakeholder understandings of what constitutes quality education, and government concerns with the changing needs of society. However, they also reveal a slightly different emphasis in a country where central planning is the norm, and where large disparities in socio-economic conditions impact on the provision of schooling. Teacher development is regarded as central to the provision of high quality education within mainland China but it is clear that certain global and local pressures were making this difficult.

6.1. Multi-functional role and changing society

Being a teacher within many societies around the world is not easy. The impact of globalisation and an information and communication revolution has contributed to a rapidly changing society which puts new demands on education systems. From our findings, it is clear that within mainland China the views and demands of students, as well as policy makers, were changing and becoming more diverse and sophisticated. This, together with a culturally determined, inclusive view of what a teacher should be could make their work exceptionally challenging. The requirements of a strict code of moral and ethical standards for Chinese teachers which, by law, requires them to be patriotic and law-abiding, dedicated to their work, to care for their students, to teach and educate them, to serve as role models, and to pursue lifelong learning (Chinese Ministry of Education, 2008) could be overwhelming, especially in poorly resourced and understaffed situations. This is supported by previous research (Hu, 1994; Yang and Guo, 2010) which draws attention to the expectations of an excellent teacher, which include addressing all aspects of their students' development; possessing a rich subject knowledge; displaying such personality traits as happiness, kindness, confidence, diligence, intelligence and humour; to innovate and use modern teaching strategies and resources, and to frequently evaluate and update their teaching techniques; to carry out their own research; to network both socially and academically; and, above all, to achieve high student outcomes.

6.2. Curriculum reform and classroom practice

Our findings illustrate how these demands were also set in a context of ongoing curriculum reform which brought its own pressures. Such reform was attempting to move Chinese society away from an overwhelming and deep seated emphasis on examination results towards the facilitation of all round development and lifelong learning, although so far with some evidence of limited success (Thomas et al., 2012). The impact of curriculum reform was not a central focus of the study but it was clear that some difficulties were being experienced. This supports previous research (Wang, 2010; Brown et al., 2011) which has drawn attention to concerns over teachers' abilities to engage with new concepts, teaching materials and teaching strategies, new forms of student evaluation, new management systems and the need to teach optional subjects. This appeared especially acute for older, more experienced teachers and there was some evidence that the key discourse of student-centred learning has been especially challenging for teachers in rural schools with large class sizes (Wang, 2011). The findings of this study support previous research

which draws attention to the tremendous stress that meeting the new curriculum requirements can bring for teachers (Sun and Li, 2005; Zhu and Si, 2006; Yazhuan et al., 2010).

There was also evidence from the research that one approach to supporting teachers' reflective practice is a renewed emphasis, at the local, regional and national levels, on educational evaluation and the introduction of more sophisticated and relevant methods of measuring student and school performance. One national policy maker reported on the recently established Centre for National Assessment for Education Quality (NAEQ), located in Beijing Normal University, which has been set up to monitor educational achievement in every year grade of basic education through national tests. However, such monitoring will go beyond the raw data of academic achievement to include measures for four other aspects of education quality: ideological, moral and civic literacy; physical and mental health; art literacy, practical skills and innovative awareness; and the influence of educational and social environments on students' development (see NAEQ, 2013). It was also evident that stakeholders recognised the local need for a more nuanced, value-added approach to the assessment of school quality in order to enhance feedback to schools, improve teacher self-evaluation, and inform the development of teachers' practice (Thomas et al., 2012).

The findings also demonstrate that, similar to work in Western societies, a key dimension of the effective teacher was seen to be the ability to create a supportive teaching and learning environment. Interestingly, this was seen to be a collective and collaborative responsibility and not the individual teacher's alone. The school, the teacher and the students all had their part to play. On the one hand, it was considered important that teachers were able to balance creating new opportunities for collaborative work with the more traditional, familiar and widely entrenched approach of stimulating individual competition in the classroom in order to motivate students to fully engage with their learning. They were expected to maintain sound relationships with students while acting morally in line with their professional commitment and positive attitudes. However, there was also recognition by all stakeholders that students had a responsibility to actively contribute to this positive environment. This was demonstrated by the way in which some student respondents were keen to maximise their study time in school and resented disruption by other students. This resonates with previous research (Anderson, 2004) which drew attention to the importance of student involvement in their own learning. Finally, the importance of a supportive school ethos which could engender pride and allow teachers and students to identify with the school's aims and objectives was also seen as an important aspect of quality.

6.3. Inequality and professional development

Within a vast country like China which, while currently emerging as a major economy, still has areas of great disadvantage, it is important to consider the context when thinking about issues such as teacher supply and retention (Scheerens, 2000; UNICEF, 2000; UNESCO, 2004). A key aspect with regard to improving the education system nationwide is the need to improve teacher quality and support teacher professional development. However, our findings suggest that all stakeholders were aware of the inequalities with regard to the distribution of resources between schools, especially differences between the West and other areas of china, and regarded this as a key barrier to improving professional development and teacher quality. Such evidence supported previous research which has shown that, while various initiatives had been inspired by the introduction of Shulman (1986, 1987) ideas for strong pedagogical content knowledge in order to develop effective teaching, new or less experienced teachers—more likely

found in rural western areas—were shown to be lacking in their ability to integrate knowledge around subject knowledge, teaching strategies and collaborative learning (An et al., 2004; Tang and Chen, 2005; Li et al., 2006; Xu and Gong, 2007; Sun, 2008; Liu and Zheng, 2010). Similarly, Brock (2009) discusses a participatory approach which was introduced by the well known Gansu Basic Education Project in western China to train teachers in new ways of teaching rather than relying on the inculcation of content knowledge alone. Evidence from the respondents in this study suggested that opportunities for further training, organised from national to school levels, were available but that the ability of individual schools and teachers to take advantage of these could vary. Insufficient resources to cover for absent colleagues, and an imbalance in terms of teacher qualifications and subject specialisms could limit the opportunities for some teachers. This situation was particularly acute for schools in rural, remote and western areas. In light of these limitations, attempts were being made to encourage school-based training which was likely to be more closely connected with local issues while, at the same time, providing more opportunities for more teachers. There was some evidence that current government priorities to increase resources in disadvantaged Western areas was having some effect in improving quality but there was scepticism about the long term effectiveness of relocating teachers from urban to rural schools.

Concerns about current disparities between high expectations, excessive workloads, multiple roles and poor pay were evident in our data, and previous research (Liu, 2010) has drawn attention to the extent to which this might drive people away from teaching as a career. This is reflected in the conclusion of the 2011 International Summit on the Teaching Profession which concluded that there was a need to make teaching more attractive and to solve problems with recruitment and retention (Schleicher, 2011; Stewart, 2011). Johnson (2012) has pointed out that, given the current changes to teachers' work; it may no longer be possible to count on new generations taking up teaching as a lifetime career. This can have serious consequences for the quality of education because, as Barber and Mourshed (2007) have pointed out in their survey of what makes effective schools effective, there is some evidence of a correspondence between high performing schools and the qualifications and training of the teachers. Though this is a complex area and no causal link can be proved, the findings of this study have shown that there are concerns about the level of initial and further training and development available to teachers, especially in rural areas.

7. Limitations and conclusion

This paper has discussed some illustrative findings from individual interviews and focus groups conducted with a range of stakeholders (national and local policy makers, head teachers, teachers, students) across a sample of schools from three local authorities within mainland China. In a country like China with such vast geographical and social differences, encompassing as it does both extremely poor, disadvantaged communities together some of the world's most advanced high tech cities, it would be foolish to place too great an emphasis on conclusions drawn from such a small sample. It should be recognised that evidence from this study sought to broaden the usual metropolitan perspective by including schools in rural and disadvantaged areas, together with those in the Western region of the country where a lack of resources and issues of minority inequalities are most evident. Given the word limitations of this article, it has only been possible to represent a small number of voices in detail, though the intention of the authors has been to draw out common themes and link these to both the existing international literature and current Chinese policy context. The researchers recognise that, within the

constraints of the study, it was not possible to examine either school or local authority level documentation, or observe in detail classroom practice which could have triangulated the data collected. The data can say nothing in detail about issues of school and class size, the background or previous experience of teachers or pupils, or the perceptions of Chinese parents. It should also be recognised that the participants in the study did so voluntarily and so were a self-selected group who may have demonstrated a particular view of educational development within China. Social, cultural and political pressure can constrain the ability of individuals to share their perceptions within the context of a focus group interview and, even within individual interviews, participants can be wary of sharing unpopular or exceptional views. The data were collected by Chinese speakers, from both within and outside the national system, and were then translated by the bi-lingual project members. Trouble was taken to represent both the original meaning and emphasis of the participants, and the analysis of the substantial interview data collected was conducted with care and rigour, including attention to the central concerns of cross-cultural researchers in establishing conceptual, rather than strict linguistic equivalence.

So, while recognising the limitations in the data discussed, and despite the limited scope and exploratory nature of these findings, it is argued that this paper can still provide greater understanding of the current situation of teaching and teachers' work within mainland China. The findings help to illustrate the ways in which the demands of ongoing educational reform, which include the active involvement of students and a focus on lifelong learning for both students and teachers, can motivate against quality of schooling. Tensions within a traditional structure of an exam-based environment can make it difficult for teachers to address the demands of *sù zhì jiào yù* while ensuring the support of parents and the reputation of their school. Structural and financial inequality was evident in the responses, and strategies for further professional development were being compromised in some areas. The findings also support the view from Reynolds et al. (2011) that teacher behaviour is influenced by their underlying attitudes and values, although more research is needed on the way in which the formation and expression of such values shapes, and is shaped by, the historical, social and political context, in which they work. It can be argued that this is especially needed in developing country contexts where little such research already exists.

With these exploratory findings in mind, a key aim of the ongoing research is to extend these findings to investigate the nature of teachers' professional development and learning in mainland China. The relevance of such Western concepts as professional learning communities (PLCs) in a context where tradition and practice emphasise collectivism and the collaborative nature of the group, rather than the promotion of the individual, is also being investigated. Preliminary findings strongly suggest that such a concept already exists within teachers' working practice within China, although the emphasis is somewhat different (Thomas et al., 2013). For example, in the Chinese context such PLCs tend to include only teachers, rather than all professional staff who have contact with the pupils. It is hoped that a combination of Western and Confucian heritage concepts, and the identification of current localised practice, will help to enhance future approaches to teacher professional learning.

References

- Acker, S., 1999. *The Realities of Teachers' Work: Never a Dull Moment*. Cassell, London.
- Alexander, R., 2000. *Culture and Pedagogy: International Comparisons in Primary Education*. Blackwell Publishers, London.
- An, S., Kulm, G., Wu, Z., 2004. The Pedagogical Content Knowledge of Middle School, Mathematics Teachers in China and the U.S. *Journal of Mathematics Teacher Education* 7 (2) 145–172.

- Anderson, L.W., 2004. *Increasing Teacher Effectiveness*, 2nd ed. The United Nation, Paris.
- Barber, M., Mourshed, M., 2007. *How the World's Best-performing School Systems Come Out on Top*. McKinsey & Company, Social Sector Office, London.
- Bray, M., Thomas, R.M., 1995. Levels of comparison in educational studies: different insights from different literatures and the value of multilevel analyses. *Harvard Educational Review* 65 (3) 472–490.
- Broadfoot, P., Osborn, M., Gilly, M., Bucher, A., 1993. *Perceptions of Teaching: Primary School Teachers in England and France*. Cassell, London.
- Brock, A., 2009. Moving mountains stone by stone: reforming rural education in China. *International Journal of Educational Development* 29 (5) 454–462.
- Brophy, J., Good, T.L., 1986. Teacher behaviour and student achievement. In: Wittrock, M.C. (Ed.), *Handbook of Research on Teaching*, 3rd ed. Macmillan, New York, pp. 328–375.
- Brown, G.T.L., Hui, S.K.F., Yu, F.W.M., Kennedy, K.J., 2011. Teachers' conceptions of assessment in Chinese contexts: a tripartite model of accountability, improvement, and irrelevance. *International Journal of Educational Research* 50 (5/6) 307–320.
- Campbell, R.J., Kyriakides, L., Muijs, R.D., Robinson, W., 2003. Differential teacher effectiveness: towards a model for research and teacher appraisal. *Oxford Review of Education* 29 (3) 347–362.
- CCCCP (The Central Committee of the Chinese Communist Party), 1985. 中共中央关于教育体制改革的决定 The decisions of the Central Committee of the CCP about education reform. <http://202.205.177.9/edoas/website18/18/info3318.htm> (accessed 1.03.11).
- Cheng, Y.C., Tam, W.M., Tsui, K.T., 2002. New conceptions of teacher effectiveness and teacher education in the new century. *Hong Kong Teachers' Centre Journal* 1 (Spring) 1–19.
- Cheng, K.M., Wong, K.C., 1996. School effectiveness in East Asia: concepts, origins and implications. *Journal of Educational Administration* 34 (5) 32–49.
- Chinese Ministry of Education, 2001. *基础教育课程改革纲要(试行) Guidelines for Curriculum Reform of Basic Education (pilot ed.)*.
- Chinese Ministry of Education (教育部), 2008. *中小学教师职业道德规范(2008年修订) Standards of Occupational Ethics and Morality for Primary and Secondary Teachers. (2008 Revision)*.
- Chinese Ministry of Education, 2010. *国家中长期教育改革和发展规划纲要(2010–2020年) The guidelines of the national plan for medium- and long-term educational reform and development (2010–2020)*. Retrieved 30 July 2010 from http://www.moe.gov.cn/publicfiles/business/htmlfiles/moe/moe_838/201008/93704.html.
- Creemers, B.P.M., 1994. *The Effective Classroom*. Cassell, London.
- Creemers, B.P.M., Kyriakides, L., 2012. *Improving Quality Education: Dynamic Approaches to School Improvement*. Routledge, London.
- Creemers, B.P.M., Kyriakides, L., 2008. *The Dynamics of Educational Effectiveness: a Contribution to Policy, Practice and Theory in Contemporary Schools*. Routledge, London.
- Creemers, B.P.M., Reezigt, G.J., 1996. School level conditions affecting the effectiveness of instruction. *School Effectiveness and School Improvement* 7 (3) 197–228.
- Day, C., Samons, P., Stobart, G., Kington, A., Gu, Q., 2007. *Teachers Matter: Connecting Work, Lives and Effectiveness*. Open University Press, Maidenhead.
- Dello-Iacovo, B., 2009. Curriculum reform and 'quality education' in China: an overview. *International Journal of Education Development* 29 (3) 241–249.
- Doyle, W., 1986. Classroom organization and management. In: Wittrock, M.C. (Ed.), *Handbook of Research on Teaching*, 3rd ed. Macmillan, New York, pp. 392–431.
- Dweck, C.S., Leggett, E.L., 1988. A social-cognitive approach to motivation and personality. *Psychological Review* 95, 256–273.
- Fang (方长春), C.-C., Feng (风笑天), X.-T., 2005. 阶层差异与教育获得——一项关于教育分流的实证研究 How distinction of social stratum affects the attainment of education: an analysis on split-flows of education. *清华大学教育研究 Tsinghua Journal of Education* 26 (5) 22–30.
- Galton, M., 1987. An ORACLE chronicle: a decade of classroom research. *Teaching and Teacher Education* 3 (4) 299–313.
- Gu (顾航宇), H.Y., 2011. 教师师德行为与学生内在素质塑造——教师师德行为为一种素质教育力量 Teachers' ethical behaviour and the development students' intrinsic quality: teachers' ethical behaviour as a driving force for all-round development of education. *汉大学学报(社会科学版) Journal of Jiangnan University (Social Science Edition)* 28 (6) 110–112.
- Guan (管培俊), P.-J., 2004. 关于教师教育发展的十个观点 Conceptions of teacher education reform and development. *教师教育研究 Teacher Education Research* 16 (4) 3–7.
- Guan, Q., Meng, W.J., 2007. China's new national curriculum reform: innovation, challenges and strategies. *Frontiers of Education in China* 2 (4) 579–604.
- Guo (郭文), W., 2011. 贵州中小师德师风建设现状调查研究 Research on the present condition of the development of teachers' virtue and manner in primary and secondary schools in Guizhou Province. *贵州师范学院学报 Journal of Guizhou Normal College* 27 (11) 75–80.
- Halpin, D., 2010. National curriculum reform in China and England: origins, character and comparison. *Frontiers of Education in China* 5 (2) 258–269.
- Hargreaves, A., 2001. Emotional geographies of teaching. *Teaching and Teacher Education* 103 (6) 1056–1080.
- Hay McBer, 2000. *Research into Teacher Effectiveness: A Model of Teacher Effectiveness*. dFEE, Norwich Report for the Department for Education and Employment.
- Hextall, I., Gewirtz, S., Cribb, A., Mahony, P., 2007. Changing teacher roles, identities and professionalism an annotated bibliography. <http://www.kcl.ac.uk/content/1/c6/01/41/56/bibliography.pdf>.
- Hofstede, G., 1991. *Cultures and Organisations: Software of Mind*. McGraw-Hill, London.
- Hu (胡秀琴), X.Q., 1994. 学生对教师的期望——关于教师素质的调查报告. *运城学院学 Journal of Yuncheng University* 2, 72–74.
- Huang (黄秀琴), X.W., 2011. 初中数学教师有效教学行为的调查分析. *中学数学教学 High School Mathematics Teaching* 6, 10–13.
- IEEQC, 2012. Improving educational evaluation and quality in China website. <http://ieeqc.bristol.ac.uk> (accessed 30.04.12).
- Jiang (江萍萍), P.-P., Yao (姚月仙), Y.-X., 2012. 从教师提出问题走向学生发现问题——From teacher asking questions to student discovering problems—changing students' learning style in the new curriculum. *教育 Education and Teaching Research* 26 (1) 44–48.
- Jin (金延), Y., 2010. 关于教师品德建设问题的几点思考 Views on construction of teacher's moral character. *当代教师教育 Contemporary Teacher Education* 3 (1) 80–85.
- Jing, Z., Hu, W., 2007. Country profile commissioned for the EFA Global Monitoring Report 2008, education for all by 2015: will we make it? China—country case study.
- Johnson, S.M., 2012. Having it both ways: building the capacity of individual teachers and their schools. *Harvard Educational Review* 82 (1) 107–122.
- Klieme, E., 2012. Qualities and effects of teaching: integrating findings across subjects and cultures. In: Keynote presented at Third Biennial Meeting of the Special Interest Group Educational Effectiveness (SIG 18) of the European Association for Research on Learning and Instruction (EARLI), From Theory to Theory: Empirical Analyses in Relation to Theoretical Models of Educational Effectiveness. 29–31 August 2012, Zurich, Switzerland.
- Kong (孔凡哲), F.Z., Li (李满), Q., Shi (史宁中), N.Z., 2005. PISA 对我国中小学考试评 The inspiration of PISA for educational quality control and examination of the primary and middle schools of our country. *外国教育研究 Studies in Foreign Education* 32 (179) 72–76.
- Kyriakides, L., Christoforou, Ch., 2011. A synthesis of studies searching for teacher factors: implications for educational effectiveness theory. In: Paper presented at the American Educational Research Association (AERA) Conference, April 2011, New Orleans.
- Kyriakides, L., Campbell, R.J., Gagatsis, A., 2000. The significance of the classroom effect in primary schools: an application of Creemers' comprehensive model of educational effectiveness. *School Effectiveness and School Improvement* 11, 501–529.
- Leu, E., Price-Rom, A., 2006. *Quality of Education and Teacher Learning: A Review of the Literature*. USAID Educational Quality Improvement Project 1, Washington, DC.
- Li (李芳), F., 2009. PISA 测试对我国新课程下高考改革的启示 Enlightenment from PISA test to China's college entrance examination in the new curriculum reform. *喀什师范学院 Journal of Kashgar Teachers College* 30 (6) 88–90.
- Li (李家成), J.C., Liu (柳海民), H.-M., 1999. 论教育质量的影响因素 Factors affecting the quality of education. *教育科学 Education Science* 1, 1–3.
- Li (李琼), Q., Ni (倪玉菁), Y.-J., Xiao (萧宁波), N.-B., 2006. 小学数学教师的学科教学:表现特点及其关系的研究 Elementary school mathematical teachers pedagogical content knowledge: its features and relationship with subject matter knowledge. *教育 Journal of Educational Studies* 2 (4) 58–64.
- Liu (刘义兵), Y.-B., Zheng (郑志辉), Z.-H., 2010. 学科教学知识再探三题 Further discussion on subject teaching knowledge. *课程·教材·教法 Curriculum, Teaching Material and Method* 30 (4) 96–100.
- Liu (刘要悟), Y.-W., 2010. 现实与理想的反差——我国中小学教师从业面临的境遇 Realistic and ideal contrasts: Chinese primary and secondary school teachers dilemma in practising career. *当代教师教育 Contemporary Teacher Education* 3 (1) 1–5.
- Liu, F., 2004. Basic education in China's rural areas: a legal obligation or an individual choice? *International Journal of Educational Development* 24, 5–21.
- Lortie, D., 1975. *Schoolteacher: A Sociological Study*. University of Chicago Press, London.
- Lu (卢尚建), S.-J., 2009. 我国有效教学研究十年:回顾与反思 Effective-teaching researches in the past 10 years in China: retrospection and some reflections. *西北师大(社会科学版) Journal of Northwest Normal University(Social Sciences)* 46 (5) 113–118.
- McNess, E., 2009. Les valeurs danoises, fondement de la *Folkeshole* (Danish values: foundation of the *Folkeshole*). *Revue internationale d'éducation de Sèvres* 50, 99–111.
- McNess, E., 2006. Nous écouter, nous soutenir, nous apprendre: a comparative study of pupils' perceptions of the pedagogic process. *Comparative Education* 42 (4) 517–532.
- McNess, E., 2004. Culture, context and the quality of education: evidence from a small-scale extended case study in England and Denmark. *Compare* 34 (3) 315–327.
- Menter, I., Muschamp, Y., Nicholls, P., Ozga, J., Pollard, A., 1997. *Work and Identity in the Primary School: A Post-Fordist Analysis*. Open University Press, Buckingham.
- Mpokosa, C., Ndaruhutse, S., 2008. *Managing Teachers—The Centrality of Teacher Management to Quality Education: Lessons from Developing Countries*. VSO International, CBT Educational Trust, London, Reading.
- Muijs, D., Reynolds, D., 2010. *Effective Teaching: Research and Practice*. Paul Chapman, London.
- Muijs, D., Reynolds, D., 2000. School effectiveness and teacher effectiveness in mathematics: some preliminary findings from the evaluation of the mathematics enhancement programme (primary). *School Effectiveness and School Improvement* 11, 273–303.
- NAEQ, 2013. National assessment of educational quality website. <http://www.eachina.org.cn/introduce.php> (accessed 1.03.13).

- National Education Inspection Team (国家教育督导团). 2009. 国家教育督导报告 2008 (摘要)—关注义务教育教师 Summary: 2008 report on national education inspection: pay attention to teachers of compulsory education. *教育发展研究 Research in Educational Development* 1, 1–5.
- National People's Congress (全国人民代表大会). 1993. 中华人民共和国教师法 Teacher law of the People's Republic of China. Retrieved 6 January 2012, from http://www.moe.edu.cn/publicfiles/business/htmlfiles/moe/moe_619/200407/1314.html.
- National People's Congress (全国人民代表大会). 2009. 温家宝作政府工作报告: 2009 年 3 月 5 日在第十一届全国人民代表大会第二次会议上 the report on the work of the government delivered by Premier Wen Jiabao at the Second Session of the Eleventh National People's Congress on March 5, 2009. Retrieved 17 January 2012, from <http://www.xinhuanet.com/2009lh/090305a/wz.htm>.
- Nias, J., 1989. *Primary Teachers Talking: A Study of Teaching As Work*. Routledge, London.
- Nie (聂志成), Z.C., 2007. 教师专业化与教师教育课程的重构 Teacher professionalisation and reconstruction of teacher education curriculum. *Journal of Hunan University of Science and Engineering 湖南科技学院学报* 28 (6) 147–150.
- OECD, 2011. Chapter 4: Shanghai and Hong Kong: two distinct examples of education reform in China. In: *Lessons from PISA for the United States: Strong Performers and Successful Reformers in Education*. OECD Publishing, Paris, pp. 83–115.
- OECD, 2009. *Creating Effective Teaching and Learning Environments*. OECD Publishing, Paris.
- OECD, 2010. *Teachers' Professional Development*. Office of the Official Publications of the European Union, Luxembourg.
- Osborn, M., Broadfoot, P., McNess, E., Planel, C., Ravn, B., Triggs, P., 2003. *A World of Difference?: Comparing Learners across Europe*. Oxford University Press, Buckingham.
- Ren, W., 2009. Reinforcement on teachers' morality construction—an eternal subject in educational development. *Asian Culture and History* 1 (2) 180–184.
- Reynolds, D., Sammons, P., De Fraine, B., Townsend, T., Van Damme, J., 2011. Educational effectiveness research (EER): a state of the art review. In: Paper presented at the 24th Annual Meeting of the International Congress for School Effectiveness and Improvement, 4–7 January 2011, Limassol, Cyprus.
- Robinson, B., Yi, W., 2008. The role and status of non-governmental ('daike') teachers in China's rural education. *International Journal of Educational Development* 28, 35–54.
- Rudduck, J., Flutter, J., 2000. Pupil participation and pupil perspective: carving a new order of experience. *Cambridge Journal of Education* 30 (1) 75–89.
- Sammons, P., Ko, J., 2008. Using Systematic Classroom Observation Schedules to Investigate Effective Teaching: Overview of Quantitative Findings. School of Education University of Nottingham, Nottingham Report of Effective Classroom Practice (ECP) Project.
- Scheerens, J., 2007. Conceptual framework for the development of the PISA 2009 context questionnaires and thematic reports. In: OECD Paper for the PISA Governing Board.
- Scheerens, J., 2000. *Improving School Effectiveness*. UNESCO: International Institute for Educational Planning, Paris.
- Scheerens, J., Bosker, R.J., 1997. *The Foundations of Educational Effectiveness*. Pergamon, Oxford.
- Schleicher, A., 2011. *Building a High-Quality Teaching Profession: Lessons from around the World*. OECD, Paris Background Report for the International Summit on the Teaching Profession.
- Shulman, L., 1987. Knowledge and teaching: foundations of the new reform. *Harvard Educational Review* 57 (1) 1–23.
- Shulman, L.S., 1986. Those who understand: knowledge growth in teaching. *Educational Researcher* 15 (2) 4–14.
- Skilbeck, M., Connell, H., 2004. Teachers for the future: the changing nature of society and related issues for the teaching workforce. A Report to the Teacher Quality and Educational Leadership Taskforce of the Ministerial Council for Education, Employment Training and Youth Affairs. http://www.mceetya.edu.au/verve/_resources/teachersforthefuture_file.pdf.
- Stallings, J., 1985. Effective elementary classroom practices. In: Kyle, M.J. (Ed.), *Reaching for Excellence: An Effective Sourcebook*. US Governing Printing Office, Washington, DC, pp. 14–42.
- Stewart, V., 2011. *Improving Teacher Quality around the World: The International Summit on the Teaching Profession*. Pearson Foundation and the MetLife Foundation, New York.
- Sun (孙杰远), J.-Y., Li (李菁), Q., 2005. 新课程背景下教师职业压力的调查研究 A survey of the teachers job pressure under the new curriculum. *广西师范大学学报 (哲学社会科学版) Journal of Guangxi Normal University (Philosophy and Social Science Edition)* 41 (1) 99–103.
- Sun (孙自辉), Z.H., 2008. 中学英语教师的学科教学知识调查研究. *中小学外语教学 (中学篇) Foreign Language Teaching in Schools* 9, 22–25.
- Tang (唐林), L., Chen (陈是健), S.-J., 2005. 实现策略教学与学科知识教学整合的实验 An experimental study on integrating the teaching of strategies with the teaching of knowledge. *西南师范大学学报 (人文社会科学版) Journal of Southwest China Normal University (Philosophy & Social Sciences Edition)* 31 (4) 30–33.
- Tang (唐爱民), A.-M., 2010. 道德成长: 教师教育不能遗失的伦理维度 Moral growth: an ethical dimension which can't be lost in teacher education. *课程·教材·教法 Curriculum, Teaching Material and Method* 30 (2) 78–82.
- The State Council of the People's Republic of China (中共中央国务院). 2001. 国务院关于基础教育改革与发展的决定 The State Council's decision on basic education reform and development. Retrieved 15th March 2011, from <http://www.edu.cn/20010907/3000665.shtml>.
- Tu (屠锦红), J.-H., Pan (潘洪建), H.-J., 2011. 大班额 “有效教学” 的困境与出路——基于学习共同体的视域 The difficult position and way out for “effective teaching” in big-size classes—based on learning community. *课程·教材·教法 Curriculum, Teaching Material and Method* 31 (11) 30–35.
- Thomas, S.M., Peng, W.J., 2011. Improving educational evaluation and quality in China. Final report to ESRC. Accessed 12 March 2012 via <http://www.esrc.ac.uk/my-esrc/grants/RES-167-25-0353/outputs/Read/319342b2-09f8-4638-b3ee-14f62726a4de>.
- Thomas, S.M., Salim, M., Munoz-Chereau, B., Peng, W.J., 2012. Educational quality effectiveness and evaluation: perspectives from China, South America and Africa. In: Chapman, C., et al. (Eds.), *School Effectiveness and Improvement Research, Policy and Practice: Challenging the Orthodoxy?* Routledge, Abingdon, pp. 125–145.
- Thomas, S.M., Peng, W.-J., Li, J., Yi, L., Yan, X., Li, X., Feng, J., Tian, H., 2013. Overview of teachers professional development and the role of professional learning communities to enhance teachers practice and student outcomes in China. In: Paper presented at International Congress for School Effectiveness and Improvement, 3–6 January 2013, Santiago, Chile.
- Tikly, L., 2011. Towards a framework for researching the quality of education in low-income countries. *Comparative Education* 47 (1) 1–23.
- Tikly, L., Barrett, A., 2011. Social justice, capabilities and the quality of education in low-income countries. *International Journal of Educational Development* 31 (1) 3–14.
- UNESCO, 2004. *EFA Global Monitoring Report 2005, Education for All: The Quality Imperative*. UNESCO, Paris.
- UNICEF, 2000. *Defining Quality in Education*. UNICEF, New York.
- United Nations, 2002. *Implementation of the United Nations Millennium Declaration*. Report of the Secretary-General.
- Wang (王振宏), Z.H., Wang (王克静), K.J., You (游旭群), X.Q., 2010. 论教师的创新人格因素 On teacher's creative personality factors. *当代教师教育 Contemporary Teacher Education* 3 (1) 6–10.
- Wang (王毓), Y., 2010. 天津市普通高中教师适应新课改情况调研报告. *天津市教科院学报 Journal of Tianjin Academy of Educational Science* 2, 42–45.
- Wang, D., 2011. The dilemma of time: student-centered teaching in the rural classroom in China. *Teaching and Teacher Education* 27 (1) 157–164.
- Wu (吴益), Y., 2009. 教育质量与校长理解——从 60 多位校长关于教育质量的回答说起 The quality of education and headteachers' point of view—the responses of more than 60 headteachers to education quality. *新教育 New Education* 12, 7–8.
- Xia (夏雁), F., Song (宋晓云), X.-Y., 2009. 科学教育质量观的现实考量 Study on the scientific education quality outlook. *南昌大学学报 (人文社会科学版) Journal of Nanchang University (Humanities and Social Sciences)* 40 (6) 187–190.
- Xu (徐章福), Z.-T., Gong (龚建荣), J.-R., 2007. 学科知识和学科教学知识在课堂教学中的有机融合 The organic integration of subject matter knowledge and pedagogical content knowledge in classroom instruction. *教育学报 Journal of Educational Studies* 3 (6) 34–39.
- Yang (杨薇), W., Guo (郭玉英), Y.Y., 2010. 骨干教师视阈下的优秀教师评价标准——来自第一批高中课改实验区的调查. *现代教育管理 Modern Education Management* 7, 83–86.
- Yazhuan, L., Qing, Z., Yugui, Z., 2010. An investigation into sources of stress among high school chemistry teachers in China. *Procedia—Social and Behavioral Sciences* 9, 1658–1665.
- Yi, H., Zhang, L., Luo, R., Shi, Y., Mo, D., Chen, X., Brinton, C., Rozelle, S., 2012. Dropping out: why are students leaving junior high in China's poor rural areas? *International Journal of Educational Development* 32, 555–563.
- Yu (余海军), H.J., 2010. 论农村教师专业化的困境和对策 Dilemma and countermeasures in professionalization of rural teachers. *教育科学论坛 Education Science Forum* 3, 51–53.
- Yu (俞志芳), Z.-F., 2008. 关于教师反思能力的几点思考 Considerations on teachers' reflective abilities. *扬州大学学报 (高教研究版) Journal of Yangzhou University (Higher Education Study Edition)* 12 (6) 24–26.
- Zhou (周力), L., 2010. 试析我国应试教育长期存在的原因 Analysis on the reasons for the persistence of examination-orientation education. *辽宁工业大学学报 (社会科学版) Journal of Liaoning University of Technology (Social Science Edition)* 12 (3), pp. 83–84, 90.
- Zhu (朱振飞), Z.F., Si (施新祥), X.X., 2006. 新课程下初中教师的心理压力及其相关因素之调查研究 An analysis of junior middle school teachers mental stress and relevant factors under the new curriculum reform. *浙江教育学院学报 Journal of Zhejiang Education Institute* 3, 24–29.
- Zhu (朱迎春), Y.-C., Zhou (周志刚), Z.-G., 2006. 从教育公平原则看中国城乡教育差距 Looking at the educational differences between the city and the country in China from the principle of equal education. *教育理论与实践 Theory and Practice of Education* 26 (4) 25–27.
- Zhuang (庄德刚), D.G., 2012. 有效教学要促进学生从“想学”向“会学”转变. *化学教学与化学 Chemistry Teaching and Learning* 1, 19–20.